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Pacific Operations
Los Angeles

5785 Corporate Avenue
Suite 150
Cypress, CA 90630
(714) 229-4806
Fax (714) 229-4805

105.0263

Clayton
ENVIRONMENTAL
CONSULTANTS

September 9, 1991

Mr. Sam Yu
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
Los Angeles Region
101 Centre Plaza Drive
Monterey Park, California 91754-2156

Clayton Project No. 36548.00
CRWQCB File No. 105.0263

Subject: Revised Remedial Action Plan for Clarifier and Sump Areas at Stoody Company, 16425 East Gale Avenue, City of Industry, California

Dear Mr. Yu:

On behalf of Stoody Company, Clayton Environmental Consultants, Inc. is submitting this revised remedial action plan (RAP) to the California Regional Water Quality Control Board (CRWQCB) in response to a letter from the CRWQCB, to Stoody Company, dated August 22, 1991.

This RAP addresses the comments of the previously mentioned letter and outlines a proposed scope of work and procedures for the subject remediation. It also contains a description of a proposed limited subsurface soil investigation to assess discharge concerns voiced by the CRWQCB.

If you have any further questions, please contact me at (714) 229-4806.

Sincerely,

David H. Randell

David H. Randell, R.G.
Manager, Environmental Engineering
Pacific Operations

GR/hls
cc: Fred Pelton, Stoody Company
Rick Williams, Stoody Company
Jaswant Singh, Ph.D., Director, Pacific Operations

Pacific Operations
Los Angeles

5785 Corporate Avenue
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Revised Remedial Action Plan
for
Clarifier and Sump Areas
at
Stoody Company
City of Industry, California

Clayton Project No. 36548.00
September 9, 1991

CONTENTS

1.0 INTRODUCTION

Stoody Company Inc. retained Clayton Environmental Consultants Inc., on July 22, 1991, to produce a remedial action plan (RAP) to perform soil remediation at their facility in the City of Industry, California (Figure 1). This work was requested by the California Regional Water Quality Control Board (CRWQCB) in a letter dated July 3, 1991. The RAP was revised according to CRWQCB correspondence dated August 22, 1991.

The planned remediation activities include the removal of an industrial clarifier and a sump, and the excavating of contaminated soil in both these areas. This RAP also includes a description of a limited shallow soil investigation planned for a portion of the rear of the Stoody facility. This RAP was prepared in accordance with the scope of work and terms and conditions, set forth in Clayton's Proposal No. 91-SEE-099 dated July 18, 1991.

1.1 OBJECTIVES

Clayton's objectives are to provide a plan that is acceptable to the CRWQCB for: the removal of the clarifier, and the removal of a sufficient volume of contaminated soil in the area of the clarifier; removal of the sump, and the removal of a sufficient volume of soil from the area of the sump. The requirements of the CRWQCB were outlined in letters dated July 3, and August 22, 1991, to Stoody Company.

1.2 SCOPE OF WORK

Clayton will perform the following scope of work to accomplish the objectives for the soil remediation:

A. Clarifier

- Monitor and document the rerouting of non-industrial waste water away from the clarifier
- Empty and steam clean the clarifier
- Excavate and remove the clarifier
- Excavate contaminated soil in the area of the clarifier with a backhoe to a depth of 15 feet
- Place excavated soil on a plastic liner for future disposal by Stoody Company
- Monitor vapors from excavation and spoils piles to comply with South Coast Air Quality Management District (SCAQMD) Rule 1166

- Collect soil samples from the pit after excavating
- Analyze soil samples in a laboratory certified by the State of California, Department of Health Services

B. Sump

- Excavate and remove the sump
- Excavate contaminated soil in the area of the sump with a backhoe to a depth of 10 feet
- Place excavated soil on a plastic liner for future disposal by Stoody Company.
- Monitor vapors from excavation and spoils piles to comply with South Coast Air Quality Management District (SCAQMD) Rule 1166
- Collect soil samples from the pit after excavating
- Analyze soil samples in a laboratory certified by the State of California, Department of Health Services
- Cover excavation spoils pile(s) with plastic
- Prepare and submit a closure report

C. Shallow Soil Investigation

- Drill five soil boreholes to a depth of 5 feet
- Collect two samples per borehole for TPH, VOC, and metals analyses

D. General

- Backfill and compact excavations with imported fill material after confirmatory soil samples demonstrate adequate cleanup is achieved

2.0 BACKGROUND

On July 21, 1988, Clayton Environmental Consultants performed a site assessment at the Stoody Company. Five soil boreholes (SB-1 through SB-5; Figure 2) were drilled to assess a chemical waste storage area, a chemical waste storage sump area, an electrical transformer area, and a general storage area. The boreholes were drilled to 10 feet below ground surface and sampled. Laboratory analyses revealed the presence of total petroleum hydrocarbons (TPH), and a number of volatile organic compounds (VOCs).

On January 23, 1989, Clayton advanced the previously drilled borehole SB-5 deeper and constructed a groundwater monitoring well (MW). Two other boreholes, SB-6 and SB-7, were drilled and sampled and a groundwater monitoring well was constructed. SB-6 is now known as MW-1. SB-7 is now known as MW-2. SB-5 is now known as MW-3. On March 6, 1989, a fourth groundwater monitoring well was installed upgradient of the other three wells (MW-4).

Laboratory analysis of the soil samples from MW-1 through MW-4 detected no TPH. The laboratory reported the detection of acetone and methylene chloride in the soil samples from MW-4, the upgradient well.

Laboratory analysis of the water samples from MW-1 through MW-4 detected the presence of eight different VOCs. The presence of those VOCs has stimulated a quarterly groundwater monitoring program by the CRWQCB separate from the apparent soil contamination concerns.

On January 18 and 19, 1990, Clayton performed an additional site assessment at Stoody Company. Three 10-foot boreholes (SB-1 through SB-3) were drilled and sampled in a chemical storage area and two boreholes (SB-4 through SB-5) were drilled and sampled near the industrial waste clarifier.

The laboratory reported the detection of five VOCs in the soil samples collected in the boreholes in the chemical storage area. The laboratory reported the detection of eight VOCs in the soil samples collected from the boreholes near the clarifier, as well as TPH.

On January 31 and February 1, 1991, Clayton performed additional site assessment work at Stoody Company. Four exploratory boreholes, BH-10 through BH-13, and one additional groundwater monitoring well, MW-5, were drilled. Two of the boreholes, BH-10 and BH-11, were drilled at the industrial clarifier and MW-5 was installed just downgradient of the clarifier. Boreholes BH-12 and BH-13 were drilled in the area of the sump in the chemical storage area.

The laboratory reported the detection of five different VOCs, TPH, and three metals in the soil samples collected from the boreholes near the clarifier. The laboratory reported the detection of four VOCs, TPH, and three metals in the soil samples collected from the soil boreholes near the sump.

3.0 REMEDIATION ACTIVITIES

Clayton's remediation will consist of three distinct activities: field procedures, field work, and laboratory analyses. These activities will be performed to meet the existing site constraints, the remediation objectives, and the requirements of the CRWQCB.

In addition, Clayton will prepare a site Health and Safety Plan in accordance with current Occupational Safety and Health Administration (OSHA) requirements as OSHA described in 1910.120.

3.1 FIELD PROCEDURES

Clayton will use the following field procedures to monitor the field activities used during remediation. These procedures will be used for excavating the contaminated soil, sampling the excavation limits, and analyzing the soil samples.

3.1.1 Excavating Procedures

Clayton will direct a backhoe with an extension arm to excavate the soil during the excavating procedures. As the soil is removed from the ground it will be placed near the excavation area, on plastic sheeting on the existing asphalt area. When enough soil has been excavated to meet the objectives of this plan, the newly created spoils pile(s) from the excavation will be covered with plastic for future disposal by Stoody Company.

3.1.2 Soil Sampling Procedures

A. Clarifier and Sump

Soil samples will be collected using a drive sampler with extension rods to collect samples from the excavation bottom and sidewalls. Stainless steel cylinders (2.5 inch diameter and 3 inch length) will be driven into the soil with a drive sampler. The ends of the tube will be covered with aluminum foil and polyethylene caps and Scotch 33+ electrical tape. The samples will then be labeled, placed in self-sealing plastic bags, put under Blue-Ice™ in a portable cooler and transported, following standard chain of custody procedures, to a laboratory certified by the State of California, Department of Health Services for analysis.

B. Shallow Soil Investigation

During the shallow soil investigation, a hand auger and drive sampler will be used to collect soil samples at the surface (1-foot below grade) and at a depth of 5 feet. Soil sampling and drilling techniques generally follow Department of Health Services, California Site Mitigation Decision Tree guidelines. A total of five shallow boreholes will be drilled (BH-14 through BH-18).

A drive sampler with two 3-inch long, 2-inch outside diameter stainless steel sleeves will be used to acquire relatively undisturbed samples at the required depths. The liner will be sealed with aluminum foil, plastic end caps, and electrical tape. It will then be labeled, inserted in a self-sealing plastic bag, and placed on ice in an ice chest for transport to a California state-certified laboratory for analysis. Standard chain-of-custody procedures will be followed.

The boreholes and soil samples will be described by a Clayton geologist under the supervision of a California Registered Geologist using the Unified Soil Classification System (USCS). Borehole logs will be prepared to document these descriptions.

Drill cuttings will be placed with excavated soil from the clarifier for disposal by Stoody. The boreholes will be backfilled to grade with a concrete grout mixture.

C. General

Clayton will evaluate excavated and sampled soils for volatile organic compounds (VOCs) in the field using an organic vapor analysis (OVA) headspace technique. Selected samples of soil from the backhoe bucket or hand sampler will be placed in Ziploc™ bags and allowed to volatilize in direct sunlight for a minimum of 30 minutes. A sensor tip of a photoionization detector (PID) will then be inserted through the plastic bag. The concentration of VOCs in the plastic bag will be measured with the PID meter and recorded in the field notes. The PID meter will also be used to measure breathing zone and excavation atmosphere concentrations of VOCs during the excavating and drilling activities.

The excavations and soil samples will be described by a Clayton Geologist under the supervision of a California Registered Geologist using the Unified Soil Classification System (USCS).

3.2 FIELD WORK

Field work for remediation will consist of:

- Excavating and removing the clarifier
- Excavating soil from the clarifier area
- Excavating and removing the sump
- Excavating soil from the sump area
- Collecting soil samples from the two excavation bottoms and side walls for laboratory analyses
- Stockpiling and covering excavated soils with plastic sheeting for future disposal by Stoody Company
- Backfilling and compacting the excavations, and repaving the surface

A. Clarifier Area

Laboratory reports of analyses of the soil samples collected from the clarifier area showed the concentrations of TPH, total 1,2-dichloroethene, toluene, copper, and nickel to be in concentrations unacceptable to the CRWQCB to be left in place, according to their letter issued to Stoody Company on October 22, 1990.

Clayton anticipates, after the removal of the clarifier, the excavating of about 67 cubic yards of soil in the area of the clarifier. The excavation is anticipated to be 10 feet long by 12 feet wide by 15 feet deep (Figure 3). After excavating, two soil samples will be collected from the excavation bottom and six soil samples will be collected from the side walls. A minimum of eight soil samples will then be submitted to the laboratory for analyses. Additional soil samples may be required at locations with obvious color changes or signs of contamination.

B. Sump Area

Laboratory reports of analyses of the soil samples collected from the sump area showed the concentrations of TPH, total 1,2-dichloroethene, trichloroethene, tetrachloroethene, copper, and nickel to be in concentrations unacceptable to the CRWQCB to be left in place, according to their letter issued to Stoody Company on October 22, 1990.

Clayton anticipates the excavating of about 24 cubic yards of soil in the area of the former sump. The excavation is anticipated to be 8 feet long by 8 feet wide by 10 feet deep (Figure 4). After excavating, one soil sample will be collected from the excavation bottom and one soil sample will be collected from each of the side walls. A minimum of five soil samples will then be submitted to the laboratory for analyses.

C. Surface Spill Area

Clayton will collect two soil samples (1-foot and 5-foot depths) from each of five soil boreholes requested by the CRWQCB during their August 5, 1991, inspection at the Stoody facility (Figure 5). The soil samples will be analyzed for the presence of TPH, VOCs and selected metals, following the same laboratory protocol as samples for the clarifier and sump areas.

3.3 ANALYTICAL METHODS

Laboratory analyses of the soil samples from the previous site assessment revealed the presence of TPH, VOCs, and the soluble threshold limit concentration (STLC) and total threshold limit concentration (TTLC) metals. Based on those results Clayton has selected the following test methods for soil analyses:

- EPA Method 418.1 for TPH
- EPA Method 8240 for VOCs
- STLC Metals

- TTLC Metals for copper, nickel, and chromium VI

3.4 ACTION LEVELS

Based on the previous site assessment work and the correspondence from the CRWQCB issued to Stoody Company on October 22, 1990, Clayton will use the guidelines in the table of the appendix as acceptable concentrations of contaminants to be left in the soil.

We plan to receive the laboratory analyses results on a 2-week turnaround schedule and report the results to the CRWQCB for their approval prior to backfilling the excavations. We are attempting to schedule 7-day turnaround for EPA Method 8240 analysis for a standard fee amount.

3.5 BACKFILLING

The excavations will not be backfilled until confirmatory samples have demonstrated cleanup to CRWQCB-approved levels. Imported soil will be used to backfill the two excavations. The imported material will first be subjected to laboratory analysis by EPA Method 418.1 for TPH. Acceptable concentrations of TPH will be 10 mg/kg and less. The imported material will be tested once for about every 10 cubic yards of fill. Up to five fill material samples will be composited per laboratory test.

The backfill will be placed under the direction of a licensed engineer or engineering geologist. The backfill will be placed such that the material is compacted to at least 90% of its maximum compaction capabilities.

3.6 SOIL DISPOSAL

It is anticipated that the excavated soil will be removed from the site and placed in an appropriate landfill facility. Clayton will assist Stoody Company in identifying a properly licensed waste disposal company to handle transportation and disposal of the soil to an appropriate landfill facility. Clayton will provide the CRWQCB with documentation of soil disposal in our closure report for this project.

4.0 CLOSURE REPORT

A report containing the data collected during the remediation activities, documentation of the proper disposal of the excavated soil, results of the shallow soil investigation, and Clayton's recommendations and conclusions will be sent to the CRWQCB upon completion of the RAP and disposal of the excavated soil.

5.0 LIMITATIONS

The information and opinions rendered in this report are exclusively for use by Stoody Company. Clayton Environmental Consultants, Inc. will not distribute this report without Stoody Company consent except as may be required by law or court order. The information and opinions expressed in this report are given in response to our limited assignment and should be evaluated and implemented only in light of that assignment. We accept responsibility for the competent performance of our duties in executing the assignment and preparing this report in accordance with the normal standards of our profession but disclaim any responsibility for consequential damages.

This report submitted by:

Guy K. Romine
Environmental Consultant

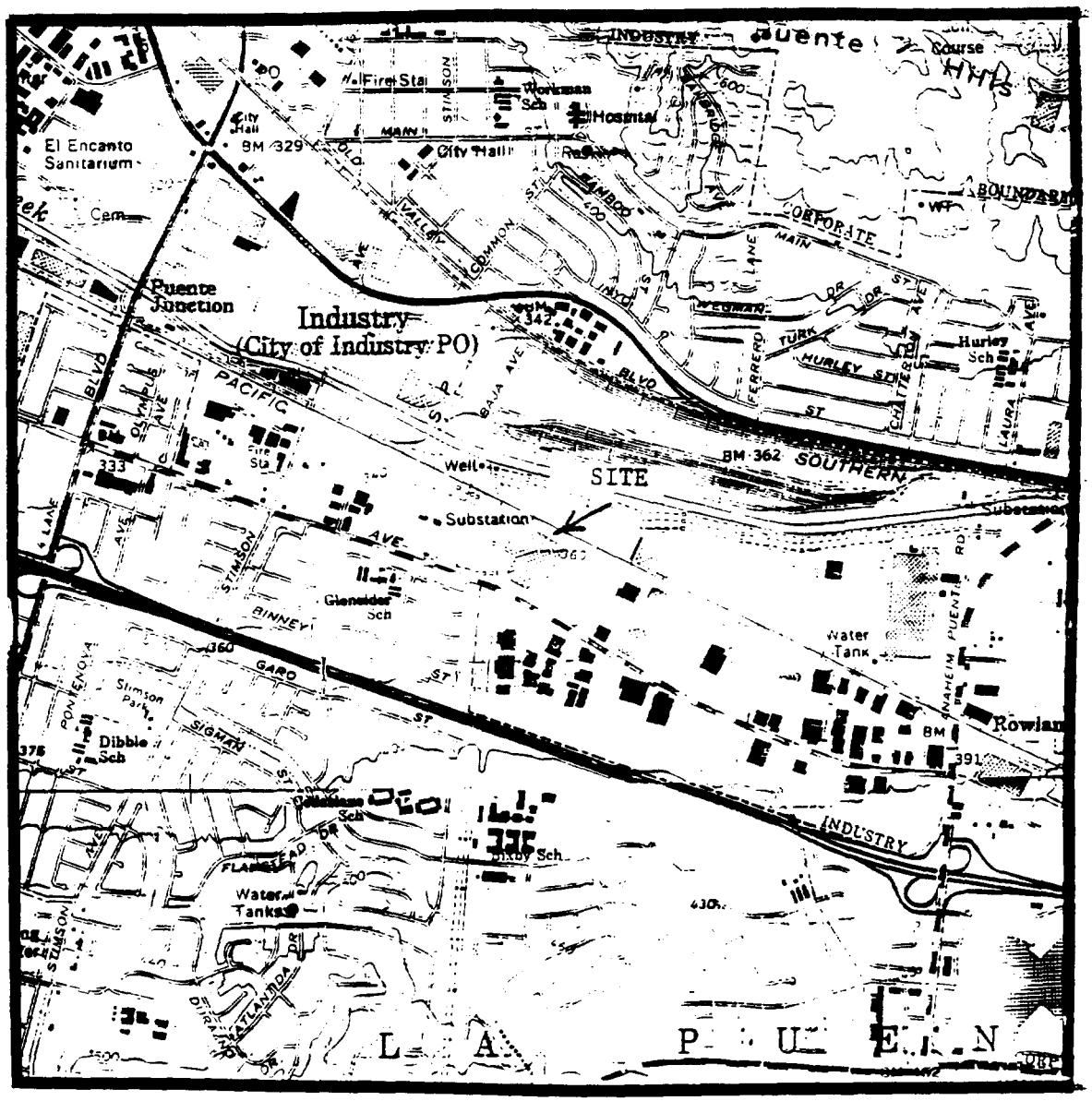
This report reviewed by:

David H. Randell
Registered Geologist, No. 3977
Manager, Environmental Engineering
Pacific Operations

September 9, 1991

APPENDIX

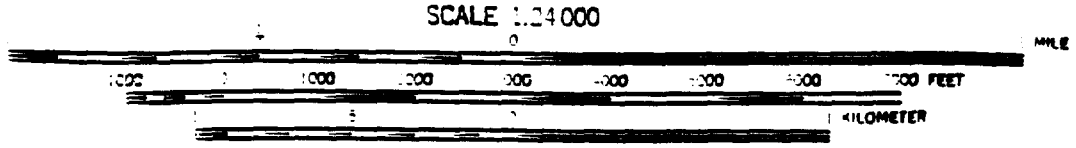
FIGURES AND TABLE



BASEMAP TAKEN FROM 1966 USGS BALDWIN PARK, CALIFORNIA QUADRANGLE, 7.5 MINUTE SERIES (TOPOGRAPHIC), PHOTOREVISED 1981.

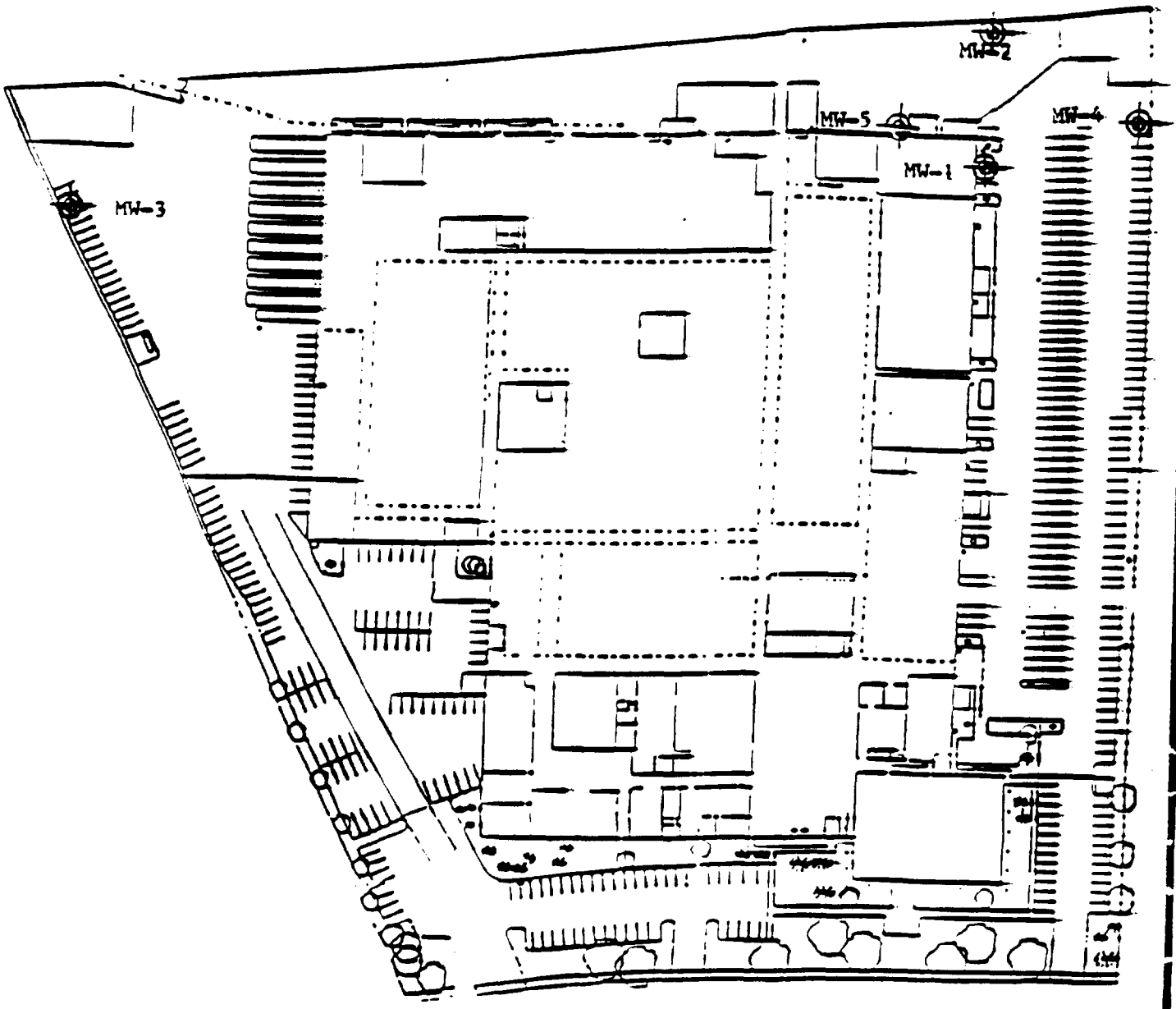
QUADRANGLE LOCATION

SCALE 1:24 000



CONTOUR INTERVAL 20 FEET

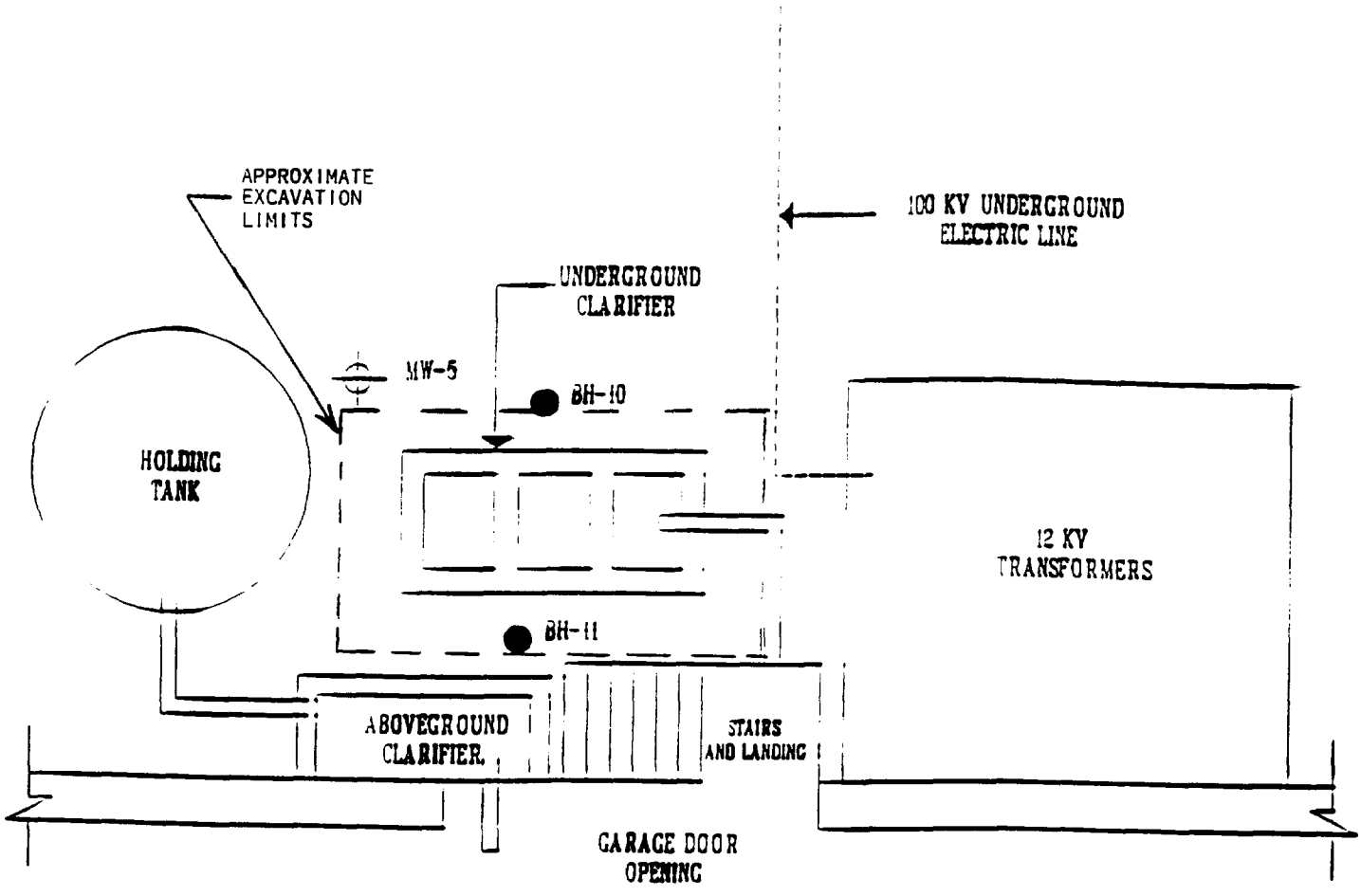
CLAYTON ENVIRONMENTAL CONSULTANTS, INC.	FIGURE
GENERAL SITE LOCATION	
STOODY COMPANY 16425 E. GALE AVENUE INDUSTRY, CALIFORNIA	CLAYTON PROJECT NO. 36548.00
	1 8/91



SCALE: 1 INCH = 150 FEET

NORTH

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.	FIGURE
GENERAL SITE PLAN	
STOODY COMPANY 16425 E. Gale Avenue INDUSTRY, CALIFORNIA	CLAYTON PROJECT NO. 36584.00
	2 8/91

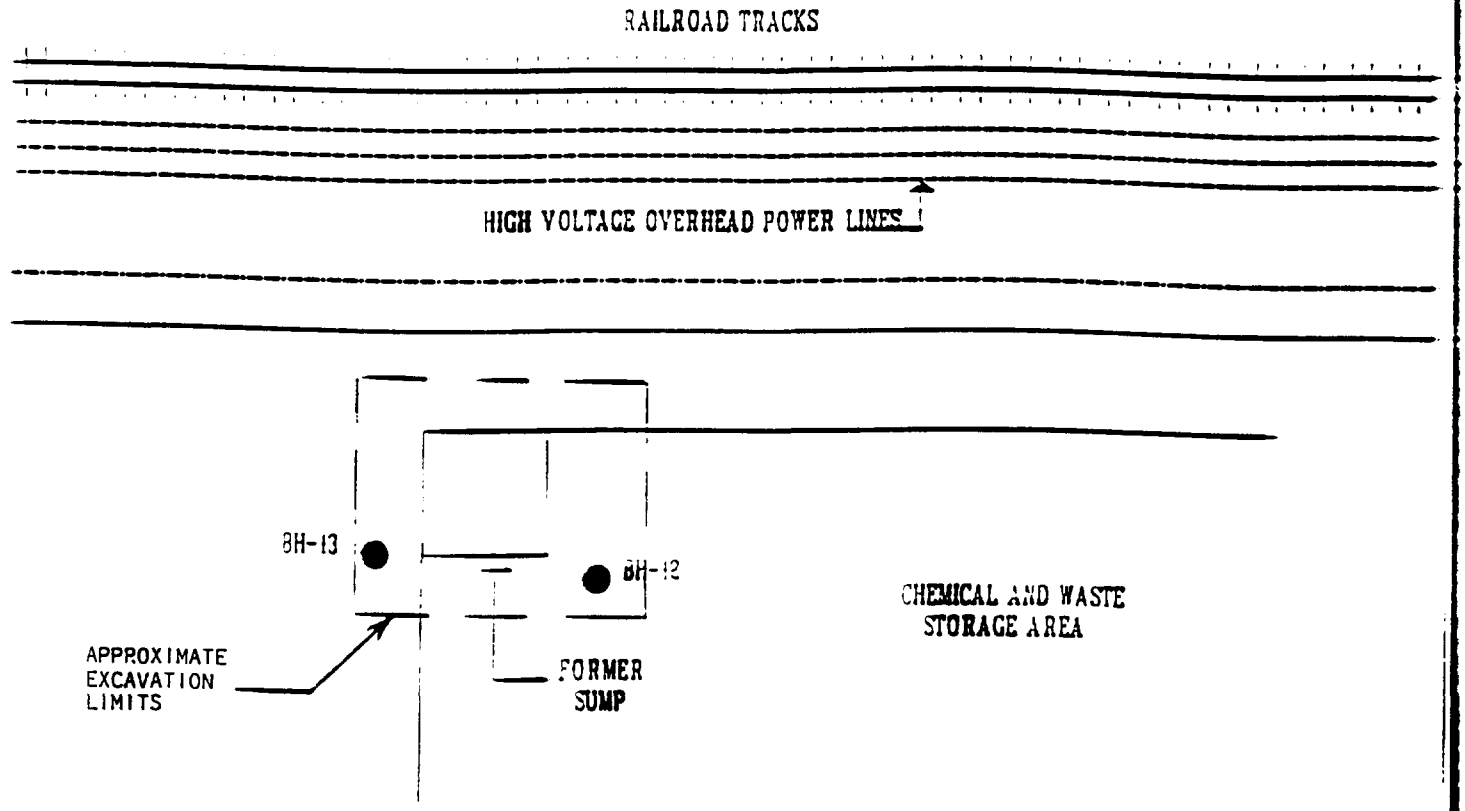


APPROXIMATE MONITORING WELL LOCATION

APPROXIMATE BOREHOLE LOCATION

NORTH

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.	FIGURE
CLARIFIER AREA STOODY COMPANY 16425 E. GALE AVENUE INDUSTRY, CALIFORNIA	CLAYTON PROJECT NO. 36548.00
	3 8/91



● APPROXIMATE BOREHOLE LOCATION

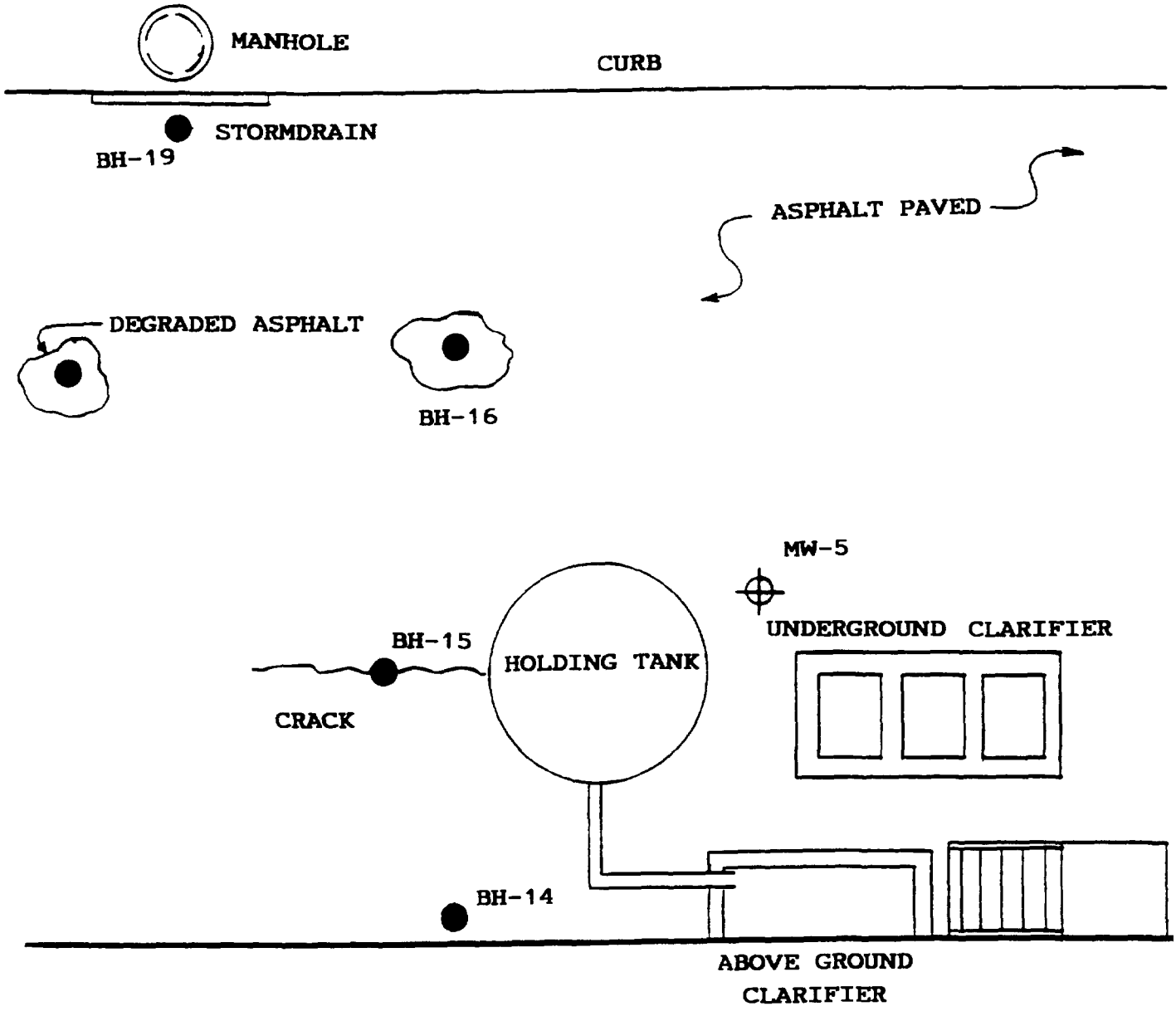
FENCE LINE

CURB LINE

DRAWING NOT TO SCALE

NORTH

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.	FIGURE
SUMP AREA	
STOODY COMPANY 16425 E. GALE AVENUE INDUSTRY, CALIFORNIA	CLAYTON PROJECT NO. 36548.00
	4 8/91



⊕ APPROXIMATE MONITORING WELL LOCATION

● APPROXIMATE SHALLOW BOREHOLE LOCATION

NORTH

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.	FIGURE
SHALLOW SOIL SAMPLING LOCATIONS STOODY COMPANY 16425 E. GALE AVENUE INDUSTRY, CALIFORNIA CLAYTON PROJECT NO. 36548.00	5 9/91

Table
Remediation Action Levels

Detected Chemical Constituents	Abbreviation	DHS or MCL (µg/L)	Cleanup Level** (mg/kg)
Organic			
Acetone	ACT	NA	NA
1,2-Dichloroethene (total)	1,2-DCE	0.5 MCL	.005
Cis-1,2-dichloroethene	Cis-1,2-DCE	6 MCL & DHS	0.06
Ethylbenzene	EB	680 MCL	6.80
Tetrachloroethene	PCE	5 MCL/DHS	0.050
Toluene	TOL	100 DHS	1.0
Trans-1,2-dichloroethene	TRANS-1,2-DCE	10 MCL & DHS	0.10
Trichloroethene	TCE	5 MCL	0.05
Total Recoverable Petroleum Hydrocarbons	TRPH	NA	10.0
Xylene, (total)	XYL	1750 MCL	17.5
Inorganic			
Chromium^{+6}	Cr^{tot} Cr^{+6}	50 MCL 50 MCL	0.5 0.5
Copper	Cu	1000 MCL	10.0
Nickel	Ni	150 SNARL	1.5

**Cleanup levels shown are 10 times DHS or MCL and converted to mg/kg
µg/L: Microgram per liter, generally equivalent to parts per billion
mg/kg: Milligram per kilogram, generally equivalent to parts per million
SNARL: Suggested no adverse response level
NA: Not available
DHS: California Department of Health Services
MCL: EPA maximum contaminant level